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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Apr 08	"Ask CAS" for self-help around the clock
NEWS	3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09	ZDB will be removed from STN
NEWS	5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS	6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03	New e-mail delivery for search results now available
NEWS	10	Jun 10	MEDLINE Reload
NEWS	11	Jun 10	PCTFULL has been reloaded
NEWS	12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS	13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30	NETFIRST to be removed from STN
NEWS	16	Aug 08	CANCERLIT reload
NEWS	17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08	NTIS has been reloaded and enhanced
NEWS	19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS	21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03	JAPIO has been reloaded and enhanced
NEWS	24	Sep 16	Experimental properties added to the REGISTRY file
NEWS	25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	27	Oct 21	EVENTLINE has been reloaded
NEWS	28	Oct 24	BEILSTEIN adds new search fields
NEWS	29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS	31	Nov 18	DKILIT has been renamed APOLLIT
NEWS	32	Nov 25	More calculated properties added to REGISTRY
NEWS	33	Dec 02	TIBKAT will be removed from STN
NEWS	34	Dec 04	CSA files on STN
NEWS	35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	36	Dec 17	TOXCENTER enhanced with additional content
NEWS	37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS	38	Dec 30	ISMEC no longer available
NEWS	39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS	40	Jan 21	NUTRACEUT offering one free connect hour in February 2003
NEWS	41	Jan 21	PHARMAML offering one free connect hour in February 2003
NEWS	42	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS	43	Feb 13	CANCERLIT is no longer being updated
NEWS	44	Feb 24	METADEX enhancements
NEWS	45	Feb 24	PCTGEN now available on STN

NEWS 46 Feb 24 TEMA now available on STN
 NEWS 47 Feb 26 NTIS now allows simultaneous left and right truncation
 NEWS 48 Feb 26 PCTFULL now contains images
 NEWS 49 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results

NEWS EXPRESS January 6 CURRENT WINDOWS VERSION IS V6.01a,
 CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
 AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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 NEWS WWW CAS World Wide Web Site (general information)

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 17:17:02 ON 04 MAR 2003

=> file agricola caplus biosis
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ENTRY	SESSION
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FULL ESTIMATED COST

FILE 'AGRICOLA' ENTERED AT 17:17:12 ON 04 MAR 2003

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FILE 'BIOSIS' ENTERED AT 17:17:12 ON 04 MAR 2003
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=> s triple gene block
 L1 206 TRIPLE GENE BLOCK

=> s l1 and (triple gene block 2 or tgb2)
 L2 12 L1 AND (TRIPLE GENE BLOCK 2 OR TGB2)

=> dup rem l2
 PROCESSING COMPLETED FOR L2
 L3 7 DUP REM L2 (5 DUPLICATES REMOVED)

=> d 1-7 ti

L3 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
 TI Interactions of the TGB1 protein during cell-to-cell movement of Barley stripe mosaic virus

L3 ANSWER 2 OF 7 AGRICOLA DUPLICATE 2
 TI Reduction of potato mop-top virus accumulation and incidence in tubers of potato transformed with a modified triple gene

block gene of PMTV.

- L3 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Trans-Complementation of Long-Distance Movement of White clover mosaic virus **Triple Gene Block** (TGB) Mutants: Phloem-Associated Movement of TGBp1
- L3 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Subcellular Sorting of Small Membrane-Associated **Triple Gene Block** Proteins: TGBp3-Assisted Targeting of TGBp2
- L3 ANSWER 5 OF 7 AGRICOLA DUPLICATE 3
TI Molecular dissection of the mechanism by which potexvirus **triple gene block** proteins mediate cell-to-cell transport of infectious RNA.
- L3 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Phylogenetic analysis of **triple gene block** viruses based on the TGB 1 homolog gene indicates a convergent evolution
- L3 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Independent expression of the first two **triple gene block** proteins of beet necrotic yellow vein virus complements virus defective in the corresponding gene but expression of the third protein inhibits viral cell-to-cell movement

=> d 2 ab

- L3 ANSWER 2 OF 7 AGRICOLA DUPLICATE 2
AB Potato mop-top virus (PMTV) RNA 2 contains a **triple gene block** (TGB) that consists of a set of three overlapping genes. These genes encode three proteins necessary for viral cell-to-cell movement. The gene encoding for the second **triple gene block** protein, TGB2, was mutated in a region that is highly conserved among TGB2 proteins from different viruses. The mutated TGB2 gene, under transcriptional control of the 35S promoter from cauliflower mosaic virus, was transformed into potato (*Solanum tuberosum* cv. Hulda) by Agrobacterium-mediated transformation. Ten of the transgenic lines obtained, all of which were shown to transcribe the introduced gene, were evaluated for resistance to PMTV in a field trial. Tubers from the field were analysed for virus content by ELISA. In seven of the transgenic lines analysed there was a reduction in ELISA values relative to a non-transgenic control line. In the three lines that had the lowest ELISA readings this reduction was manifested both as a reduction in the proportion of infected tubers and as a reduction in virus levels in infected tubers. In the line showing the highest level of resistance, the total ELISA value was reduced by 79%. These results demonstrate that the introduction of a mutated TGB2 gene into potato can confer increased resistance to PMTV.

=> d 2 so

- L3 ANSWER 2 OF 7 AGRICOLA DUPLICATE 2
S0 Molecular breeding : new strategies in plant improvement, Oct 2001. Vol. 8, No. 3. p. 197-206
Publisher: Dordrecht ; Boston : Kluwer Academic Publishers, c1995-
CODEN: MOBRFL; ISSN: 1380-3743

=> d 2 au

- L3 ANSWER 2 OF 7 AGRICOLA DUPLICATE 2

AU Melander, M.; Lee, M.; Sandgren, M.

=> d 4 ab

L3 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS

AB We studied subcellular distribution of green fluorescent protein (GFP)-tagged movement proteins encoded by the second and the third genes of poa semilatifolius hordeivirus (PSLV) **triple gene block** (TGB), 15K TGBp2 and 18K TGBp3. GFP-15K transiently expressed in Nicotiana benthamiana leaf epidermal cells was associated with the endomembrane system elements. GFP-18K appeared in the membrane bodies at cell periphery. Mutation analysis demonstrated that subcellular targeting of GFP-15K depended on the protein transmembrane segment(s), whereas the TGBp3 central hydrophilic region was responsible for targeting of GFP-18K. Coexpression of GFP-15K with the intact 18K protein induced drastic changes in the TGBp2 localization: GFP-15K appeared in the cell peripheral bodies similar to those in the cells expressing GFP-18K alone. Coexpression experiments with mutant forms of both proteins argue against involvement of direct interaction between small TGB proteins in the TGBp3-assisted targeting of TGBp2 to the cell peripheral compartments. This conclusion was further confirmed by similar effects on the PSLV 15K TGBp2 localization induced by TGBp3 proteins of PSLV and potato virus X, which have no detectable sequence similarity to each other. (c) 2000 Academic Press.

=> d 5 ab

L3 ANSWER 5 OF 7 AGRICOLA

DUPLICATE 3

AB The **triple gene block** (TGB; consisting of proteins TGB1-3) and coat protein (CP) of white clover mosaic potyvirus (WCMV) are required for cell-to-cell movement or viral RNA. Cell-to-cell spread of WCMV mutants in which the TGB open reading frames had been mutated was rescued in transgenic plants expressing specific TGB proteins (TGBPs). This indicated that there are no requirements for the synthesis in cis of viral TGBPs. These transgenic plants provided an experimental framework to explore the roles performed by the TGBPs and CP in cell-to-cell movement of WCMV RNA. Microinjection experiments established that TGB1 functions as the WCMV cell-to-cell movement protein (MP). Furthermore, combined microinjection and dual-channel confocal laser scanning microscopy provided direct evidence that infectious transcripts of WCMV move cell to cell as a ribonucleoprotein complex, consisting of single-stranded RNA, TGB1, and CP. Movement of this ribonucleoprotein complex displayed an absolute requirement for the presence of both TGB2 and TGB3. A model consistent with these findings is presented.

=> d 5 so

L3 ANSWER 5 OF 7 AGRICOLA

DUPLICATE 3

SO Molecular plant-microbe interactions : MPMI, Aug 1998. Vol. 11, No. 8. p. 801-814
Publisher: St. Paul, MN : APS Press, [c1987-
CODEN: MPMIEL; ISSN: 0894-0282

=> d 5 au

L3 ANSWER 5 OF 7 AGRICOLA

DUPLICATE 3

AU Lough, T.J.; Shash, K.; Xoconostle-Cazares, B.; Hofstra, K.R.; Beck, D.L.; Balmori, E.; Forster, R.L.S.; Lucas, W.J.

=> d 7 ab

L3 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS

AB Cell-to-cell movement of beet necrotic yellow vein furovirus is controlled by three slightly overlapping genes on RNA 2 called the **triple gene block** (TGB) encoding, in order, P42, P13, and P15. Synthesis of P42 is directed by subgenomic RNA 2suba while synthesis of both P13 and P15 is probably directed by a dicistronic subgenomic RNA, 2subb. For complementation expts., each TGB protein gene was inserted into a "replicon" derived from viral RNA 3. In mixed infections, the replicons expressing P42 and P13 complemented RNA 2 mutants defective in the corresponding gene. A P15-contg. replicon did not complement a P15-defective RNA 2 but complementation was obsd. with a dicistronic replicon contg. the P15 gene placed behind the P13 gene. In mixed infections with wild-type viral RNAs, the P15-contg. replicon did not inhibit viral RNA replication in protoplasts but blocked local lesion formation on leaves. Infection of leaves was also inhibited by an RNA3-derived replicon contg. the third TGB gene from another furovirus, peanut clump virus. The results are consistent with a model in which viral cell-to-cell movement requires prodn. of appropriate relative amts. of P13 and P15, and their expression from a dicistronic subgenomic RNA provides a mechanism for coordinating their synthesis.

=> d 7 so

L3 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS

SO Molecular Plant-Microbe Interactions (1997), 10(2), 240-246
CODEN: MPMIEL; ISSN: 0894-0282

=> d 7 au

L3 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS

AU Bleykasten-Grosshans, Claudine; Guilley, H.; Bouzoubaa, S.; Richards, K. E.; Jonard, G.

=> s l1 and transgenic

L4 35 L1 AND TRANSGENIC

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 16 DUP REM L4 (19 DUPLICATES REMOVED)

=> d 1-10 ti

L5 ANSWER 1 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI **Transgenic** tobacco plants expressing the Potato virus X open reading frame 3 gene develop specific resistance and necrotic ring symptoms after infection with the homologous virus.

L5 ANSWER 2 OF 16 AGRICOLA

DUPLICATE 1

TI Rapid screening for dominant negative mutations in the beet necrotic yellow vein virus **triple gene block** proteins P13 and P15 using a viral replicon.

L5 ANSWER 3 OF 16 AGRICOLA

DUPLICATE 2

TI Reduction of potato mop-top virus accumulation and incidence in tubers of potato transformed with a modified **triple gene block** gene of PMTV.

L5 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS

DUPLICATE 3

- TI Trans-Complementation of Long-Distance Movement of White clover mosaic virus **Triple Gene Block** (TGB) Mutants:
Phloem-Associated Movement of TGBp1
- L5 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS
- TI Cell-to-cell movement of potexviruses: evidence for a ribonucleoprotein complex involving the coat protein and first **triple gene block** protein
- L5 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
- TI Cell-to-cell movement of the 25K protein of Potato virus X is regulated by three other viral proteins.
- L5 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
- TI Potato mop-top virus RNA can move long distance in the absence of coat protein: evidence from resistant, **transgenic** plants
- L5 ANSWER 8 OF 16 AGRICOLA DUPLICATE 5
- TI **Transgenic** plants expressing the TBG1 protein of peanut clump virus complement movement of TBG1-defective peanut clump virus but not of TBG1-defective beet necrotic yellow vein virus.
- L5 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS
- TI Cymbidium mosaic virus coat protein gene in antisense confers resistance to **transgenic** *Nicotiana occidentalis*
- L5 ANSWER 10 OF 16 AGRICOLA DUPLICATE 6
- TI The first **triple gene block** protein of peanut clump virus localizes to the plasmodesmata during virus infection.

=> d ab

- L5 ANSWER 1 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
- AB Tobacco plants were transformed with the open reading frame 3 gene from Potato virus X (PVX) coding for the p12 protein. Although the **transgenic** plants exhibited a normal morphological aspect, microscopic examination revealed extensive alterations in leaf tissue structure. After being challenged with PVX, the **transgenic** plants showed resistance to PVX infection and formation of specific leaf symptoms consisting of concentric rings encircled by necrotic borders. These novel symptoms were accompanied by biochemical changes normally associated with the hypersensitive response (HR) and were absent in noninfected **transgenic** plants or in PVX-infected nontransgenic plants. No equivalent virus resistance was observed after inoculation with Tobacco mosaic virus or Potato virus Y, suggesting the presence of a specific resistance mechanism. Despite development of HR-like symptoms, systemic acquired resistance was not induced in PVX-infected p12 **transgenic** plants. No evidence of an RNA-mediated resistance mechanism was found.

=> d 2 ab

- L5 ANSWER 2 OF 16 AGRICOLA DUPLICATE 1

=> d 2 so

- L5 ANSWER 2 OF 16 AGRICOLA DUPLICATE 1
- S0 Transgenic research, Aug 2001. Vol. 10, No. 4. p. 293-302
Publisher: Dordrecht, The Netherlands : Kluwer Academic Publishers.
CODEN: TRSEES; ISSN: 0962-8819

=> d 2 au

L5 ANSWER 2 OF 16 AGRICOLA DUPLICATE 1
AU Lauber, E.; Janssens, L.; Weyens, G.; Jonard, G.; Richards, K.E.;
Lefebvre, M.; Guilley, H.

=> d 7 ab

L5 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
AB **Transgenic** expression of a translatable version of the Potato
mop-top virus (PMTV) coat protein (CP) gene (encoded by RNA 3) in
Nicotiana benthamiana prevented prodn. of symptoms and infective virus
particles. RNAs 1 and 2 accumulated in inoculated and systemic leaves
but, apart from small amts. of CP transgene RNA transcript, no
genomic-length RNA 3 was found. Crude leaf exts. from inoculated plants
were not infective. However, when RNA exts. from such **transgenic**
plants were inoculated to nontransgenic N. benthamiana and N. clevelandii,
RNA 1 and RNA 2 replicated in systemic leaves of both species in the
absence of RNA 3 and virus particles, but symptoms did not develop. It is
suggested that the **triple-gene block**
proteins of PMTV (encoded by RNA 2) represent a class of long-distance RNA
movement factors.

=> d 11-16 ti

L5 ANSWER 11 OF 16 AGRICOLA DUPLICATE 7
TI Molecular dissection of the mechanism by which potexvirus **triple**
gene block proteins mediate cell-to-cell transport of
infectious RNA.

L5 ANSWER 12 OF 16 AGRICOLA DUPLICATE 8
TI Cell-to-cell and phloem-mediated transport of potato virus X: the role of
virions.

L5 ANSWER 13 OF 16 AGRICOLA DUPLICATE 9
TI Movement protein-derived resistance to **triple gene**
block-containing plant viruses.

L5 ANSWER 14 OF 16 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Movement protein-derived resistance to **triple gene**
block-containing plant viruses.

L5 ANSWER 15 OF 16 AGRICOLA DUPLICATE 10
TI Immunological detection of the 8K protein of potato virus X (PVX) in cell
walls of PVX-infected tobacco and **transgenic** potato.

L5 ANSWER 16 OF 16 AGRICOLA DUPLICATE 11
TI Disruption of virus movement confers broad-spectrum resistance against
systemic infection by plant viruses with a **triple gene**
block.

=> d 13 ab

L5 ANSWER 13 OF 16 AGRICOLA DUPLICATE 9
AB Two mutant potato virus X (PVX) movement protein (MP) genes (m12K-Sal and
m12K-Kpn) were obtained by inserting specific linkers at the boundary
between the N-terminal hydrophobic and putative transmembrane segment, and
the central invariant hydrophilic region of the respective 12 kDa, 12K,
triple gene block (TGB) protein. Several
transgenic potato lines which expressed m 12K-Sal or m12K-Kpn to

different degrees were resistant to infection by PVX, potato aucuba mosaic potexvirus and the carlaviruses potato virus M and S over a wide range of inoculum concentrations (3-300 microgram/ml). However, they were not resistant to potato virus Y, which lacks a TGB protein. We suggest that the resistance of m12K-Sal and m12K-Kpn **transgenic** potato lines is MP-derived and not RNA-mediated.

=> d 16 ab

L5 ANSWER 16 OF 16 AGRICOLA DUPLICATE 11
AB White clover mosaic virus strain O (WCLMV-O), species of the Potexvirus genus, contains a set of three partially overlapping genes (the **triple gene block**) that encodes nonvirion proteins of 26 kDa, 13 kDa, and 7 kDa. These proteins are necessary for cell-to-cell movement in plants but not for replication. The WCLMV-O 13-kDa gene was mutated (to 13*) in a region of the gene that is conserved in all viruses known to possess **triple-gene-block** proteins. All 10 13* **transgenic** lines of Nicotiana benthamiana designed to express the mutated movement protein were shown to be resistant to systemic infection by WCLMV-O at 1 microgram of WCLMV virions per ml, whereas all plants from susceptible control lines became systemically infected. Of the 13* **transgenic** lines, 3 selected for their abundant seed supply were shown to be resistant to systemic infection when challenged by inoculation with three different WCLMV strains (O, M, and J) or with WCLMV-O RNA at 10 micrograms/ml. Most plants were also resistant to systemic infection at inoculum concentrations up to 250 micrograms of WCLMV virions per ml. In addition, the three 13* **transgenic** plant lines were found to be resistant to systemic infection with two other members of the Potexvirus group, potato virus X and narcissus mosaic virus, and the Carlavirus potato virus S but not to be resistant to tobacco mosaic virus of the Tobamovirus group. These results indicate that virus resistance can be engineered into **transgenic** plants by expression of dominant negative mutant forms of **triple-gene-block** movement proteins.

=> d 16 so

L5 ANSWER 16 OF 16 AGRICOLA DUPLICATE 11
S0 Proceedings of the National Academy of Sciences of the United States of America, Oct 25, 1994. Vol. 91, No. 22. p. 10310-10314
Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424

=> s triple gene block and group I

L6 0 TRIPLE GENE BLOCK AND GROUP I

=> s 11 and (group or categ?)

L7 17 L1 AND (GROUP OR CATEG?)

=> dup rem 17

PROCESSING COMPLETED FOR L7

L8 10 DUP REM L7 (7 DUPLICATES REMOVED)

=> d 1-10 ti

L8 ANSWER 1 OF 10 AGRICOLA

TI Dual-colour imaging of membrane protein targeting directed by poa semilantent virus movement protein TGBp3 in plant and mammalian cells.

L8 ANSWER 2 OF 10 AGRICOLA

TI Genome properties of beet virus Q, a new furo-like virus from sugarbeet,

determined from unpurified virus.

- L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
TI The genome organization of the broad bean necrosis virus (BBNV)
- L8 ANSWER 4 OF 10 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Intracellular location of two groundnut rosette umbravirus proteins delivered by pVX and TMV vectors.
- L8 ANSWER 5 OF 10 AGRICOLA DUPLICATE 2
TI Cymbidium mosaic potexvirus RNA: complete nucleotide sequence and phylogenetic analysis.
- L8 ANSWER 6 OF 10 AGRICOLA
TI Beet soil-borne virus RNA 3--a further example of the heterogeneity of the gene content of furovirus genomes and of **triple gene block**-carrying RNAs.
- L8 ANSWER 7 OF 10 AGRICOLA DUPLICATE 3
TI Disruption of virus movement confers broad-spectrum resistance against systemic infection by plant viruses with a **triple gene block**.
- L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
TI Purification, properties, and subcellular localization of foxtail mosaic potexvirus 26-kDa protein
- L8 ANSWER 9 OF 10 AGRICOLA
TI **Triple gene block** proteins of white clover mosaic potexvirus are required for transport.
- L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
TI Nicotiana velutina mosaic virus: evidence for a bipartite genome comprising 3 kb and 8 kb RNAs

=> d 3 ab

- L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
AB The genome of the broad bean necrosis virus Oita-isolate (BBNV-O) [RNA1 (6.0 kb), RNA2 (2.8 kb) and RNA3 (2.4 kb)] was cloned and sequenced. Computer anal. indicates that methyltransferase, helicase and RNA-dependent RNA polymerase (RdRp) motifs are present in RNA1. The viral capsid protein (CP) cistron is located at the 5' terminal end of RNA2 and the Mr of CP (20 K) is close to that detd. by SDS-PAGE anal. An ochre codon (UAA) in the CP cistron is thought to be partially suppressed to produce a large readthrough protein. RNA3 possesses typical motifs of **triple gene block** proteins, which are also reported in several other plant viruses. The furovirus genome organization and phylogenetic anal. using RdRp and CP amino acid sequences suggest that BBNV is closely related to potato mop-top virus (PMTV), but is relatively distantly related to other furoviruses. The data also suggest that the genus Furovirus should be sepd. into several genera: the prototypical genus Furovirus, which excludes the following viruses: the PMTV **group** including BBNV; the beet necrotic yellow vein virus (BNYVV) **group**; and the peanut clump virus (PCV) **group**.

=> d 9 ab

- L8 ANSWER 9 OF 10 AGRICOLA
AB The functions of the protein products encoded by a block of three overlapping genes (the **triple gene block**) of white clover mosaic potexvirus (WClMV) have been determined. Mutations

were introduced into each of the **triple gene block** open reading frames and in vitro RNA transcripts assayed in plants and protoplasts. None of the mutants was able to induce symptoms or spread in four systemic hosts and one local lesion host, but all were able to produce progeny genomic RNA, subgenomic RNA, coat protein, and virions in inoculated protoplasts, indicating that all the **triple gene block** proteins are involved in cell-to-cell spread. Based on observed homologies between the **triple gene block** proteins of the potex-, carla-, furo-, and hordeivirus groups and Nicotiana velutina mosaic virus, and the demonstrated transport function of the WCIMV and barley stripe mosaic virus **triple gene block** proteins, these proteins are proposed to constitute a new class of transport proteins.

=> s bnyvv or barly necrotic yellow vein virus

L9 331 BNYVV OR BARLY NECROTIC YELLOW VEIN VIRUS

=> s l9 and triple gene

L10 22 L9 AND TRIPLE GENE

=> dup rem l10

PROCESSING COMPLETED FOR L10

L11 11 DUP REM L10 (11 DUPLICATES REMOVED)

=> d 1-11 ti

L11 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

TI Rapid screening for dominant negative mutations in the beet necrotic yellow vein virus **triple gene block** proteins P13 and P15 using a viral replicon

L11 ANSWER 2 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI Complete nucleotide sequence of beet necrotic yellow vein virus (**BNYVV**) RNA and its application for diagnosis and control.

L11 ANSWER 3 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI P42 movement protein of Beet necrotic yellow vein virus is targeted by the movement proteins P13 and P15 to punctate bodies associated with plasmodesmata.

L11 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2003 ACS

TI Transgenic plants expressing the TGB1 protein of peanut clump virus complement movement of TGB1-defective peanut clump virus but not of TGB1-defective beet necrotic yellow vein virus

L11 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2

TI The genome organization of the broad bean necrosis virus (BBNV)

L11 ANSWER 6 OF 11 AGRICOLA

DUPLICATE 3

TI Cell-to-cell movement of beet necrotic yellow vein virus. I. Heterologous complementation experiments provide evidence for specific interactions among the **triple gene block** proteins.

L11 ANSWER 7 OF 11 AGRICOLA

DUPLICATE 4

TI Complete nucleotide sequence of the Japanese isolate S of beet necrotic yellow vein virus RNA and comparison with European isolates.

L11 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2003 ACS

TI Beet necrotic yellow vein virus 42 kDa **triple gene block** protein binds nucleic acid in vitro

L11 ANSWER 9 OF 11 AGRICOLA

DUPLICATE 5

TI Complete nucleotide sequence of peanut clump virus RNA 1 and relationships

with other fungus-transmitted rod-shaped viruses.

L11 ANSWER 10 OF 11 AGRICOLA DUPLICATE 6
TI Efficient cell-to-cell movement of beet necrotic yellow vein virus requires 3' proximal genes located on RNA 2.

L11 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 7
TI Nicotiana velutina mosaic virus: evidence for a bipartite genome comprising 3 kb and 8 kb RNAs

=> d so

L11 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
SO Transgenic Research (2001), 10(4), 293-302
CODEN: TRSEES; ISSN: 0962-8819

=> d 2 ab

L11 ANSWER 2 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Sequence analysis of Japanese isolates of **BNYVV** and comparison with European isolates Beet necrotic yellow vein virus (**BNYVV**) is a causal agent of rhizomania of sugarbeet and is transmitted by *Polymyxa betae*. Isolates of **BNYVV** contain four or five RNA species. Complete nucleotide sequences of RNA-1, -2, -3 and -4 of a Japanese isolate (**BNYVV**-S) and RNA-5 of three Japanese isolates were determined. RNA-1 (6746 nucleotides (nts) encoded one open reading frame (ORF) of 237kDa polypeptide (P237). P237 possessed domains needed for virus genome replication. RNA-2 (4609 nts) encoded six ORFs. ORF1, 5'-proximal ORF, is the coat protein of 22kDa, followed an in-phase 54k ORF (ORF2), which is expressed by translational readthrough of the CP cistron amber termination codon (readthrough protein, P75). ORF3, 4 and 5 encoded three proteins, 42kDa (P42), 13kDa (P13) and 15kDa (P15) known as the **triple gene** block (TGB). ORF6 encoded cystein-rich 14kDa protein (P14). RNA-3 (1774 nts) and RNA-4 91465 nts) encoded 25kDa protein (P25) and 31kDa protein (P31), respectively, RNA-5 species were between 342 and 1347 nts long and encoded 26kDa protein (P26). Nucleotide sequence differences between **BNYVV**-S and the French isolate (**BNYVV**-F2) were 1.4% (RNA 1), 4.1% (RNA-2), 2.9% (RNA-3) and 3.6% (RNA-4). Amino acid sequence differences between them were 1.4% (P237), 2.1% (CP), 0.5% (P42), 1.7% (P13), 3.0% (P15), 7.0% (P14), 6.4% (P25) and 3.5% (P31). There were 0.3-0.9% sequence differences in RNA-5 of four Japanese isolates and 3.5-3.6% between the Japanese and French P isolates. Nucleotide sequence differences of CP and TGB regions between **BNYVV**-S and Yugoslavian isolate (**BNYVV**-Yu2) were 0.7% and 1.0%, respectively, indicating that **BNYVV**-S is more closely related to Yu2 than to F2. Based on sequence differences, **BNYVV**-S and Yu2 belong to the A type, where **BNYVV**-F2 belongs to the B type.

=> d 2 so

L11 ANSWER 2 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
SO Report of Hokkaido Prefectural Agricultural Experiment Stations, (September, 2001) No. 100, pp. 1-62. print.
ISSN: 0367-6048.

=> d 7 ab

L11 ANSWER 7 OF 11 AGRICOLA DUPLICATE 4
AB The complete nucleotide sequences of beet necrotic yellow vein virus

RNA-1 to RNA-4 of the Japanese isolate S (BNYVV-S) were determined and compared with those of French isolate (BNYVV-F2). The nucleotide sequences of the two isolates were very similar, differing by only 1.7% (RNA-1), 4.1% (RNA-2), 2.9% (RNA-3) and 3.6% (RNA-4), respectively. The differences of the amino acid sequences of the two isolates depended upon the open reading frames (ORF) as follows: P237, 1.4%; P22 (coat protein), 2.1%; 54k ORF, 3.4%; P42, 0.5%; P13, 1.7%; P15, 3.0%; P14, 7.0%; P25, 6.4%; P31, 3.5%. Comparison of the coat protein and **triple gene** block (P42, P13 and P15) regions of RNA-2 with other isolates revealed that BNYVV-S was much more similar to the Yugoslavian isolate (BNYVV-Yu2) than to BNYVV-F2. The nucleotide differences between BNYVV-S and BNYVV-Yu2 were less than 1%. Based upon the grouping of BNYVV variants reported by Kruse et al. [10], BNYVV-S is thus considered to belong to the A type along with BNYVV-Yu2, whereas BNYVVF2 is classified in the B type. Our data suggest that the Japanese isolate S may have been derived from European countries other than France or Germany.

=> d 7 so

L11 ANSWER 7 OF 11 AGRICOLA DUPLICATE 4
 SO Archives of virology, 1996. Vol. 141, No. 11. p. 2163-2175
 Publisher: Wien, Austria : Springer-Verlag.
 CODEN: ARVIDF; ISSN: 0304-8608

=> d 10 ab

L11 ANSWER 10 OF 11 AGRICOLA DUPLICATE 6
 AB RNA 2 of beet necrotic yellow vein virus (BNYVV) carries six open reading frames. The four 3' proximal frames encode the proteins P42, P13, P15, and P14. The first three species present homologies to proteins encoded by three overlapping open reading frames (the **triple gene** block) in potexviruses, carlaviruses, and barley stripe mosaic virus. P14 does not display homology with other known plant viral proteins. The functions of P42, P13, P15, and P14 were investigated by site-directed mutagenesis. Full-length transcripts of wild-type BNYVV RNAs 1 and 2 were infectious when coinoculated to protoplasts or leaves of Chenopodium quinoa. RNA 2 transcripts in which P42, P13, and P15 were prematurely terminated by frameshift mutations replicated in protoplasts (when inoculated with wild-type RNA 1) but were not infectious to leaves, indicating that the **triple gene** block proteins of BNYVV are essential for viral cell-to-cell spread. Mutations in P14 were not lethal in leaf infections but smaller local lesions and lesser amounts of viral RNA were produced. RNA 2-related subgenomic RNA species of 2.6, 1.4, and 0.7 kb were detected; they presumably direct synthesis of P42, P13, and P14. No species of the length predicted for a P15-specific subgenomic RNA was detected.

=> d 10 so

L11 ANSWER 10 OF 11 AGRICOLA DUPLICATE 6
 SO Virology, July 1992. Vol. 189, No. 1. p. 40-47
 Publisher: Orlando, Fla. : Academic Press.
 CODEN: VIRLAX; ISSN: 0042-6822

=> s 11 and review

L12 1 L1 AND REVIEW

=> d ti

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

TI Cell-to-cell movement of plant viruses: insights from amino acid sequence comparisons of movement proteins and from analogies with cellular transport systems

=> d so

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

SO Archives of Virology (1993), 133(3-4), 239-57
CODEN: ARVIDF; ISSN: 0304-8608

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saved answer sets no longer valid
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now available on STN
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NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27 Oct 21 EVENTLINE has been reloaded
NEWS 28 Oct 24 BEILSTEIN adds new search fields
NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002
NEWS 31 Nov 18 DKILIT has been renamed APOLLIT
NEWS 32 Nov 25 More calculated properties added to REGISTRY
NEWS 33 Dec 02 TIBKAT will be removed from STN
NEWS 34 Dec 04 CSA files on STN
NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36 Dec 17 TOXCENTER enhanced with additional content
NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN
NEWS 38 Dec 30 ISMEC no longer available
NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 40 Jan 21 NUTRACEUT offering one free connect hour in February 2003
NEWS 41 Jan 21 PHARMAML offering one free connect hour in February 2003
NEWS 42 Jan 29 Simultaneous left and right truncation added to COMPENDEX,
ENERGY, INSPEC
NEWS 43 Feb 13 CANCERLIT is no longer being updated
NEWS 44 Feb 24 METADEX enhancements
NEWS 45 Feb 24 PCTGEN now available on STN

NEWS 46 Feb 24 TEMA now available on STN
NEWS 47 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 48 Feb 26 PCTFULL now contains images
NEWS 49 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results

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=> s sugar beet and (stoma or stomatal)

L1 156 SUGAR BEET AND (STOMA OR STOMATAL)

=> s l1 and regener?

L2 14 L1 AND REGENER?

=> dup rem l2

PROCESSING COMPLETED FOR L2

L3 9 DUP REM L2 (5 DUPLICATES REMOVED)

=> s l9 and (transgenic or transform?)

L9 NOT FOUND

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=> s l3 and (transgenic or transform?)

L4 4 L3 AND (TRANSGENIC OR TRANSFORM?)

=> d -14 ti

L4 ANSWER 1 OF 4 AGRICOLA
 TI Sugar beet guard cell protoplasts demonstrate a remarkable capacity for cell division enabling applications in stomatal physiology and molecular breeding.

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
 TI Method for inducing viral resistance in plants by viral TGB2 gene transfer

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
 TI Method for inducing viral resistance in plants and viral TGB3 gene-expressing transgenic plants

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 TI Method of plant tissue culture and regeneration.

=> d so

L4 ANSWER 1 OF 4 AGRICOLA
 SO Journal of experimental botany, Feb 1997. Vol. 48, No. 307. p. 255-263
 Publisher: Oxford : Oxford University Press.
 CODEN: JEBOA6; ISSN: 0022-0957

=> d ab

L4 ANSWER 1 OF 4 AGRICOLA
 AB A highly-efficient protocol for the large-scale isolation of guard cell protoplasts from **sugar beet** (*Beta vulgaris* L.) has been developed. Optimization of conditions for culturing these protoplasts resulted in extensive cell division and colony formation, at frequencies exceeding 50%. Plants can subsequently be **regenerated** from these guard cell-derived colonies. This provides definitive confirmation that, in **sugar beet** leaf protoplast populations, only guard cells are the source of totipotent protoplasts. These findings are the outcome of a directed, non-empirical approach to overcoming plant cell recalcitrance which was initiated by exploiting computer-assisted microscopy to couple in vitro response to cell origin. The results reaffirm the conclusion that, in plants, extreme degrees of cytodifferentiation need not entail terminal specialization. The responsive nature of this system can be ascribed to the unique use of cultures essentially comprising a single in vivo cell type. A uniform model system has thus been created with potential for widespread application. Their distinct morphological (and mechanical) features make guard cells a valuable choice for studying various fundamental aspects, not only of **stomatal** physiology, but also of plant cell (de)differentiation, differential gene expression etc. Furthermore, an applied value for such a system can also be envisaged. Results indicate that these cells are highly amenable to genetic manipulation techniques. The importance of these observations to our understanding of plant cell function and behaviour is discussed.

=> d kwic

L4 ANSWER 1 OF 4 AGRICOLA
 TI Sugar beet guard cell protoplasts demonstrate a remarkable capacity for cell division enabling applications in stomatal physiology and molecular breeding.

AB A highly-efficient protocol for the large-scale isolation of guard cell protoplasts from **sugar beet** (*Beta vulgaris* L.) has been developed. Optimization of conditions for culturing these protoplasts resulted in extensive cell division and colony formation, at frequencies

exceeding 50%. Plants can subsequently be regenerated from these guard cell-derived colonies. This provides definitive confirmation that, in sugar beet leaf protoplast populations, only guard cells are the source of totipotent protoplasts. These findings are the outcome of a directed, . . . Their distinct morphological (and mechanical) features make guard cells a valuable choice for studying various fundamental aspects, not only of stomatal physiology, but also of plant cell (de)differentiation, differential gene expression etc. Furthermore, an applied value for such a system can. . .

CT beta vulgaris; beta-glucuronidase; biolistics; callus; cell culture; cell division; direct dna uptake; genetic transformation; guard cells; isolation techniques; polyethylene glycol; protoplasts; regenerative ability; reporter genes

=> d 2 so

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2

=> d 2 pi

L4	ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	---	-----	-----
PI	WO 2000055301	A2	20000921	WO 2000-EP2176	20000307
	WO 2000055301	A3	20010125		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP	1038961	A1	20000927	EP 1999-200773	19990316
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU	2000038105	A5	20001004	AU 2000-38105	20000307
EP	1161538	A2	20011212	EP 2000-916929	20000307
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EE	200100481	A	20021216	EE 2001-481	20000307

=> d 4 so

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
SO Official Gazette of the United States Patent and Trademark Office Patents, (Oct. 19, 1999) Vol. 1227, No. 3, pp. No pagination. e-file.
ISSN: 0098-1133.

=> d 4 pi

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
PI US 5969215 October 19, 1999

=> d 4 ab

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Plants may be regenerated from stomatal cells or protoplasts of such cells. Prior to regeneration the cells or protoplasts may be genetically transformed by the introduction of hereditary material most preferably by a DNA construct which is free of genes which specify resistance to antibiotics. The regeneration step may include callus formation on a hormone-free medium. The method is particularly suitable for sugar beet.

=> d 4 clm

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L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Hall, Robert David; Krens, Franciscus Andries; Verhoeven, Henricus Adrianus; Colijn-Hooymans, Mari; Dunwell, James Martin; Weyens, Guy

=> d 3 so

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2

=> d 3 pi

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9807875	A1	19980226	WO 1997-BE92	19970818
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DE, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9739350	A1	19980306	AU 1997-39350	19970818
EP 938574	A1	19990901	EP 1997-936530	19970818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6297428	B1	20011002	US 1999-242216	19990208

=> d 3 ab

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
AB The present invention concerns a method for inducing resistance to a virus, with the proviso that it is not the potato virus X, in a plant cell or a plant. The method comprises the following steps: (1) prep. a nucleic acid construct comprising a nucleic acid sequence corresponding to at least 70 % of the nucleic acid sequence of TGB3 of said virus or its

corresponding cDNA, being operably linked to one or more regulatory sequence(s) active in a plant, (2) **transforming** a plant cell with the nucleic acid construct, and (3) possibly **regenerating** a **transgenic** plant from the **transformed** plant cell. The present invention is also related to the **transgenic** plant obtained. Chenopodium quinoa and Beta macrocarpa plants resistant to beet necrotic yellow vein virus were created by infecting them with an RNA3-derived replicon contg. the TGB3 gene. The TGB3-encoded p15 protein prevented viral movement from the site of infection to neighboring cells. **Transgenic sugar beet** expressing beet necrotic yellow vein virus TGB3 were prepd.

WEST Search History

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side by side			result set

DB=USPT; PLUR=YES; OP=ADJ

L16	L14 and tgb2	0	L16
L15	L14 and bnyvv	0	L15
L14	L13 and transgenic	329	L14
L13	L11 and (resist\$ or tolera\$)	650	L13
L12	L11 and triple gene	0	L12
L11	L10 and virus	731	L11
L10	group I and plant	2197	L10
L9	group I virus	4	L9
L8	triple gene block	5	L8
L7	bnyvv and triple gene	1	L7
L6	bnyvv and triple block	0	L6
L5	L4 and plant	1	L5
L4	tgb2	13	L4

DB=PGPB; PLUR=YES; OP=ADJ

L3	bnyvv	1	L3
L2	bynvv	0	L2
L1	tgb2	3	L1

END OF SEARCH HISTORY